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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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For: **METHOD OF PRODUCING NANOSTRUCTURES IN MEMBRANES, AND
ASYMMETRICAL MEMBRANE**

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I hereby certify that this correspondence is being deposited with
the United States Postal Service as first class mail in an envelope
addressed to: Hon. Commissioner of Patents and Trademarks
Washington, DC 20231, on July 18, 2002.

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Name of Applicant, Assignee or Registered Representative

Ronald R. Santucci
Signature

July 18, 2002

Date of Signature

Assistant Commissioner
For Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Preliminary to the examination of the above-identified patent application kindly
amend the application as follows:

In the Claims:

Kindly rewrite claims 1-5 as follows:

1. (Amended) Method of producing nanostructures in membranes in which

a membrane consisting of a polymer material is irradiated with charged particles,

especially ions, to produce particle tracks,

the particle tracks of the membrane are etched using an etching liquid,

the etching operation is stopped using a stop liquid,

in such a manner that asymmetrical structures are formed,

wherein polyimide is used as the membrane material.
2. (Amended) Method according to claim 1, wherein the polyimide used is Kapton.
3. (Amended) Method according to claim 1, wherein the etching liquid used is NaOCl solution.
4. (Amended) Method according to claim 1, wherein the stop liquid used is a reducing agent, such as a solution of the redox type with KI, NO_2^- , $\text{S}_2\text{O}_3^{2-}$ or Mn^{2+} .
5. (Amended) Membrane having asymmetrical pores, consisting of polyimide and produced in accordance with the method according to claim 1.

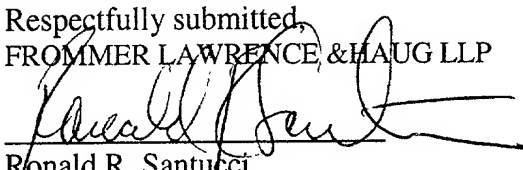
REMARKS

The claims of the above referenced application have been amended to remove all multiple dependencies and to conform them to US practice. No new matter has been added. Accordingly, an early examination of the application is respectfully requested.

The Commissioner is authorized to charge any additional fees that may be required to Deposit Account No. 50-0320.

Respectfully submitted,
FROMMER LAWRENCE & HAUG LLP

By:


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APPENDIX (version with markings):

1. (Amended) Method of producing nanostructures in membranes in which

a membrane consisting of a polymer material is irradiated with charged particles,
especially ions, to produce particle tracks,

the particle tracks of the membrane are etched using an etching liquid,

the etching operation is stopped using a stop liquid,

in such a manner that asymmetrical structures are formed,

[characterised in that] wherein polyimide is used as the membrane material.

2. (Amended) Method according to claim 1, [characterised in that] wherein the polyimide
used is Kapton.

3. (Amended) Method according to claim 1 [or 2], [characterised in that] wherein the etching
liquid used is NaOCl solution.

4. (Amended) Method according to [any of claims 1 to 3] claim 1, [characterised in that]
wherein the stop liquid used is a reducing agent, such as a solution of the redox type with KI,
 NO_2^- , $\text{S}_2\text{O}_3^{2-}$ or Mn^{2+} .

5. (Amended) Membrane having asymmetrical pores, consisting of polyimide and produced
in accordance with the method according to [any one of claims 1 to 4] claim 1.